REMARKS

By the foregoing Amendment, claims 9-13 and 25 have been canceled without prejudice or disclaimer, and new claims 26-31 have been added. In view of the foregoing amendments and following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding rejections, and that they be withdrawn.

Claim Objections

At paragraph 3 of the Office Action the Examiner objected to claim 10. By the amendment above, Applicant has canceled claim 10 without prejudice or disclaimer. The objection to claim 10 is therefore rendered moot.

Rejections Under 35 U.S.C. §103

At paragraph 4 of the Office Action, the Examiner rejected claims 9-13 and 21-25 as being unpatentable over U.S. Patent No. 4,998,111 to Ma et al. ("Ma") in view of U.S. Patent No. 6,133,871 to Krasner ("Krasner").

Even assuming that Ma and Krasner disclose all that the Examiner alleges, Ma and Krasner, either alone or in combination disclose all the features of Applicant's claimed invention. In particular, Applicant notes that claim 21 recites a two-step process as generally described at paragraph 67 of the specification. This two-step process includes non-coherent processing to provide a coarse estimate and coherent processing to refine the coarse estimate. As illustrated in FIG. 6, non-coherent processing can be based on the processing of independent 1 ms segments (604A-d). Each 1 ms segment of the GPS signal undergoes an FFT process (606). The plurality of FFT segments (608a-d) are then each multiplied by a Gold code FFT (609). The products (612a-d) then undergo an inverse FFT process (614) to produce convolutions (616a-d). The magnitudes of these convolutions are then summed and provided to a peak detector (620).

After determining coarse estimates of the peaks using non-coherent processing, coherent processing is then used to refine the coarse estimates. In claim 21, the non-coherent processing is

based on the determination of a frequency of a sine wave fitting complex values at the point of each determined peak location.

Ma and Krasner, either alone or in combination, do not disclose the two-step process of claim 21. In particular, Ma does not appear to show either coherent or non-coherent processing of GPS signals. Krasner, on the other hand, appears to only disclose coherent processing. *See,* for example, FIGS. 4 and 5 of Krasner, which shows coherent averaging (or integration) of frames at step 110. In this coherent integration, a plurality of frames are averaged together prior to processing. This coherent integration is then subject to an FFT process at step 112, the result of which is multiplied by the FFT of a PN code. This result represents the convolution of the received GPS signal and the PN code. At step 118, an inverse FFT is performed on the convolution, with the magnitude of the result being produced at step 120. As described, Krasner's process is fundamentally different from Applicant's invention. Whereas Krasner's coherent averaging is based on averaging prior to processing, Applicant's non-coherent averaging is based on averaging after processing.

One possible reason why Krasner does not use a two-step process is because it appears to have the benefit of prior knowledge. In particular, step 108 of FIG. 4 of Krasner indicates that Krasner's receiver has available to it Doppler aiding information that enables it to correct for Doppler error prior to processing. In Applicant's invention, Doppler correction information is not known prior to processing. Thus a two-step process is useful for efficiently identifying a peak location.

For at least these reasons, Applicant submits that the Examiner has not presented a *prima facie* case of obviousness with respect to independent claim 21. The rejection of claim 21 is therefore traversed. Since claims 22-24 incorporate the features of claim 21, the rejection of those claims are also traversed for at least the same reasons.

By the amendment above, Applicant has canceled claims 9-13 and 25. The rejection of claims 9-13 and 25 is therefore rendered moot.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections, and that they be withdrawn. The Examiner is invited to telephone the undersigned representative if an interview might be useful for any reason.

Respectfully submitted,

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